

Comparison of the efficacy and longevity of two types of dichlorvos strips (DDVP) proposed for use in New Zealand fruit fly surveillance traps

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The New Zealand Fruit Fly surveillance programme was initiated by Ministry of Agriculture and Forestry (MAF) in the mid 1970's to provide assurance of country freedom from economically important fruit flies, and early warning of fruit fly incursions to facilitate eradication. Approximately 7500 Lynfield traps are set up and maintained from September to June of each year. Should any fruit fly arrive, there is a reliance on dichlorvos-2,2-dichlorovinyl dimethyl phosphate, (DDVP) insecticide strips to kill any flies that are attracted into the traps by male pheromone lure attractants. A blue DDVP strip manufactured in the United Kingdom specifically for New Zealand has been in use for over 15 years. More recently, MAF was advised byASUREQuality, who are contracted to service the surveillance grid, that the strips currently in use were not able to be sourced because of a manufacturing plant failure. However, an alternative larger yellow DDVP strip with similar specifications would be available in approximately four months. Moreover, this strip is being currently used in other countries. Nevertheless, as an interim measure, a second smaller yellow DDVP strip with different specifications was supplied as a prompt suitable replacement before stocks of existing DDVP strips became critically low. MAF's Plant Health and Environment Laboratory conducted experiments to test both the smaller and larger alternative yellow strips. House fly bioassays and Gas Chromatographic (GC) destructive testing methods were used to measure the efficacy and longevity of alternative strips. Trials were undertaken at two sites, Auckland and Christchurch. The combined results of fly bioassays and GC testing at weeks 2, 4, 6, 8 will be discussed.

